

**REMARKS**

Claims 1-27 are currently being cancelled in lieu of new claims 28-50, which further particularly point out and distinctly claim the subject matter which Applicant regards as the invention, and which place the claims in proper U.S. format. These amendments do not introduce new matter within the meaning of 35 U.S.C. §132. Accordingly, entry of the amendments prior to examination is respectfully requested.

**1. Rejection of Claims 1-27 Under 35 U.S.C. §102(b)**

The Office Action states that claims 1-27 are rejected under 35 U.S.C. §102(b) as being anticipated. In particular, the Office Action states,

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dall'Occo et al. (US 6,136,932 and US 5,849,653 respectively) for the same rationale as set forth in the previous Office action mailed on March 11, 2004.

**RESPONSE**

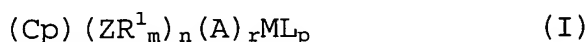
Claims 1-27 have been cancelled rendering the above rejection moot.

Notwithstanding, for a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir.

1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicant respectfully believes U.S. Patent 5,849,653 and U.S. Patent 6,136,932 (referred to herein in combination as Dall'Occo, et al.) fail to disclose, teach, or suggest "A catalyst system for polymerizing olefins comprising a product obtained by contacting:

(A) a metallocene complex of formula (I):



wherein  $(\text{ZR}^1_{\text{m}})_n$  is a divalent group bridging Cp and A;

Z is selected from C, Si, Ge, N and P;

$\text{R}^1$  being equal or different from each other, is selected from hydrogen or a linear or branched, saturated or unsaturated  $\text{C}_1\text{-C}_{20}$  alkyl,  $\text{C}_3\text{-C}_{20}$  cycloalkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  alkylaryl and  $\text{C}_7\text{-C}_{20}$  arylalkyl;

Cp is a substituted or unsubstituted cyclopentadienyl group, optionally condensed to one or more substituted or unsubstituted, saturated, unsaturated or aromatic rings, containing from 4 to 6 carbon atoms, optionally containing one or more heteroatoms;

A is selected from -O-, -S-, and -N( $\text{R}^2$ )-, wherein  $\text{R}^2$  is selected from hydrogen, a linear or branched, saturated or unsaturated  $\text{C}_1\text{-C}_{20}$  alkyl,  $\text{C}_3\text{-C}_{20}$  cycloalkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  alkylaryl and  $\text{C}_7\text{-C}_{20}$  arylalkyl, or A is Cp;

M is selected from a transition metal belonging to group 3, 4, 5, and 6, or a lanthanide or actinide metal of the Periodic Table;

L being equal or different from each other, is a monoanionic sigma ligand selected from the group consisting of hydrogen, halogen,

$-R^3$ ,  $-OR^3$ ,  $-OCOR^3$ ,  $-SR^3$ ,  $-NR^3_2$  and  $-PR^3_2$ , wherein  $R^3$  is selected from a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$  alkyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_6$ - $C_{20}$  aryl,  $C_7$ - $C_{20}$  alkylaryl and  $C_7$ - $C_{20}$  arylalkyl, wherein  $R^3$  optionally contains one or more Si or Ge atoms;

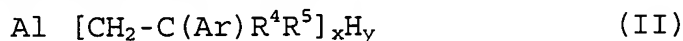
$m$  is 1 or 2;

$n$  is an integer ranging from 0 to 4;

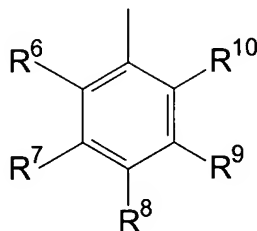
$r$  is 0 or 1, with the proviso that  $n$  is 0 when  $r$  is 0;

$p$  is an integer equal to an oxidation state of M minus 2 when  $r=1$ , and minus 1 when  $r=0$ , and ranges from 1 to 4;

(B) an organometallic aluminium compound of formula (II):



wherein Ar is a substituted aryl group corresponding to formula (III):



(III)

wherein  $R^6$ ,  $R^8$  and  $R^{10}$  are selected from the group consisting of hydrogen, halogen,  $-R^3$ ,  $-C(O)R^3$ ,  $-OR^3$ ,  $-SR^3$ ,  $-NR^3_2$  and  $-NO_2$ ;

$R^7$  and  $R^9$  are selected from the group consisting of hydrogen, halogen, linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$  alkyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_6$ - $C_{20}$  aryl,  $C_7$ - $C_{20}$  alkylaryl and  $C_7$ - $C_{20}$  arylalkyl, wherein  $R^7$  and  $R^9$  optionally contain one or more Si or Ge atoms; two adjacent substituents  $R^6$ - $R^{10}$  optionally form a ring, having 3 to 8 carbon atoms; with the proviso that  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$  and  $R^{10}$  cannot be hydrogen, and Ar cannot be an alkylaryl;

$R^4$  is selected from a linear or branched, saturated or unsaturated,  $C_1$ - $C_{10}$  alkyl,  $C_6$ - $C_{20}$  aryl,  $C_7$ - $C_{20}$  arylalkyl and  $C_7$ - $C_{20}$  alkylaryl;

R<sup>5</sup> is selected from hydrogen or a linear or branched, saturated or unsaturated, C<sub>1</sub>-C<sub>10</sub> alkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>7</sub>-C<sub>20</sub> arylalkyl and C<sub>7</sub>-C<sub>20</sub> alkylaryl; R<sup>4</sup> and R<sup>5</sup> optionally form a ring, having 3 to 8 carbon atoms; a carbon atom in the compound of formula (II) being optionally replaced by a Si or a Ge atom;

x is 2 or 3;

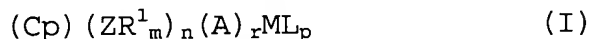
y = 3 minus x; and

(C) water;

wherein a molar ratio between the organometallic aluminium compound (B) and the water (C) is between 1:1 and 100:1."

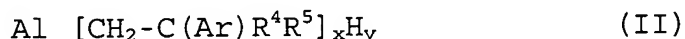
Additionally, Applicant believes Dall'Occo, et al. fail to disclose, teach, or suggest "A catalyst system for polymerizing olefins comprising a product obtained by contacting:

(A) a metallocene complex of formula (I):



wherein M, Cp, (ZR<sup>1</sup><sub>m</sub>)<sub>n</sub>, A, L, r and p have the same meanings as in claim 28; and

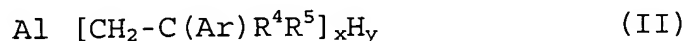
(B') a product of a reaction between water and an organometallic aluminium compound of formula (II):



wherein Ar, R<sup>4</sup>, R<sup>5</sup>, x and y have the same meanings as in claim 28;

wherein a molar ratio between the organometallic aluminium compound and the water is between 1:1 and 100:1."

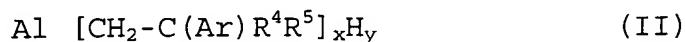
Moreover, Applicant believes Dall'Occo, et al. fail to disclose, teach, or suggest "An alumoxane obtained by contacting an organometallic aluminium compound of formula (II)



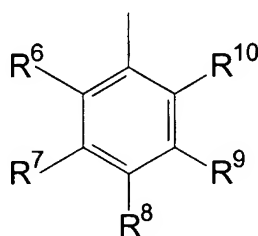
wherein Ar, R<sup>4</sup>, R<sup>5</sup>, x and y have the same meanings as in claim

28, with water, wherein a molar ratio between the organometallic aluminium compound and the water is between 1:1 and 100:1."

In particular, Dall'Occo, et al. fail to disclose, teach, or suggest "an organometallic aluminium compound of formula (II):



wherein Ar is a substituted aryl group corresponding to formula (III):



(III)

wherein  $\text{R}^6$ ,  $\text{R}^8$  and  $\text{R}^{10}$  are selected from the group consisting of hydrogen, halogen,  $-\text{R}^3$ ,  $-\text{C}(\text{O})\text{R}^3$ ,  $-\text{OR}^3$ ,  $-\text{SR}^3$ ,  $-\text{NR}^3_2$  and  $-\text{NO}_2$ ;

$\text{R}^7$  and  $\text{R}^9$  are selected from the group consisting of hydrogen, halogen, linear or branched, saturated or unsaturated  $\text{C}_1\text{-C}_{20}$  alkyl,  $\text{C}_3\text{-C}_{20}$  cycloalkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  alkylaryl and  $\text{C}_7\text{-C}_{20}$  arylalkyl, wherein  $\text{R}^7$  and  $\text{R}^9$  optionally contain one or more Si or Ge atoms; two adjacent substituents  $\text{R}^6\text{-R}^{10}$  optionally form a ring, having 3 to 8 carbon atoms; with the proviso that  $\text{R}^6$ ,  $\text{R}^7$ ,  $\text{R}^8$ ,  $\text{R}^9$  and  $\text{R}^{10}$  cannot be hydrogen, and Ar cannot be an alkylaryl;

$\text{R}^4$  is selected from a linear or branched, saturated or unsaturated,  $\text{C}_1\text{-C}_{10}$  alkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  arylalkyl and  $\text{C}_7\text{-C}_{20}$  alkylaryl;

$\text{R}^5$  is selected from hydrogen or a linear or branched, saturated or unsaturated,  $\text{C}_1\text{-C}_{10}$  alkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  arylalkyl and  $\text{C}_7\text{-C}_{20}$  alkylaryl;  $\text{R}^4$  and  $\text{R}^5$  optionally form a ring, having 3 to 8 carbon atoms; a carbon atom in the compound of formula (II) being optionally replaced by a Si or a Ge atom;

x is 2 or 3;

$y = 3 \text{ minus } x$ ", recited in each independent claim.

Additionally, Applicant traverses the use of U.S. Patent 6,136,932 as a reference under 35 U.S.C. 102(b).

The current Office Action states "claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dall'Occo, et al. (US 6,136,932 and US 5,849,653 respectively). . . ."

U.S. Patent 6,136,932 has an issue date of October 24, 2000, and a filing date of October 21, 1998. Applicant filed the present application as a PCT international application on September 15, 2000, and satisfied all of the particular filing requirements. Accordingly, Applicant's effective U.S. filing date is the filing date of the international application (i.e. September 15, 2000). Thus, U.S. Patent 6,136,932 does not meet the legal requirements as a reference under 35 U.S.C. 102(b).

Additionally, the currently claimed invention and the subject matter contained in U.S. Patent 6,136,932 are commonly owned, and Applicant was subject to an obligation of assignment to the owner of U.S. Patent 6,136,932 at the time the claimed invention was made.

In light of the above, claims 28-50 are therefore believed to be patentable over Dall'Occo, et al. Accordingly, reconsideration and withdrawal of the rejections is requested.

## 2. Double Patenting Rejection of Claims 1-14 and 19

The Office Action states,

Claims 1-14 and 19 are rejected under the judicially

created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 11-17 of U.S. Patent No. 5,849,653 for the same rationale as set forth in the previous Office action mailed on March 11, 2004.

#### **RESPONSE**

Claims 1-14 and 19 have been cancelled rendering the above rejection moot.

Notwithstanding, in light of the above arguments, Applicant believes claims 28-50 are patentably distinct from the claims of U.S. Patent 5,849,653. Accordingly, reconsideration and withdrawal of the rejection is requested.

#### **3. Double Patenting Rejection of Claims 15-18 and 20-27**

The Office Action states,

Claims 15-18 and 20-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 9 of U.S. Patent No. 6,136,932 for the same rationale as set forth in the previous Office action mailed on March 11, 2004.

#### **RESPONSE**

Claims 15-18 and 20-27 have been cancelled rendering the above rejection moot.


Notwithstanding, in light of the above arguments, Applicant believes claims 28-50 are patentably distinct from the claims of U.S. Patent 6,136,932. Accordingly, reconsideration and withdrawal of the rejection is requested.

CONCLUSION

Based upon the above remarks, the presently claimed subject matter is believed to be novel and patentably distinguishable over the references of record. The Examiner is therefore respectfully requested to reconsider and withdraw all rejections and allow all pending claims 28-50. Favorable action with an early allowance of the claims pending in this application is earnestly solicited.

The Examiner is welcomed to telephone the undersigned practitioner if she has any questions or comments.

Respectfully submitted,

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